

GAO

Report to the Chairman, Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, House of Representatives

July 1989

GOVERNMENT CONTRACTORS

Internal Controls and Charging Practices at TRW, Inc.



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**Accounting and Financial
Management Division**

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July 20, 1989

The Honorable John D. Dingell
Chairman, Subcommittee on Oversight
and Investigations
Committee on Energy and Commerce
House of Representatives

Dear Mr. Chairman:

At your request, we have conducted a review at TRW, Inc., a major defense contractor, to address certain issues raised during and after the March 1987 hearings before your Subcommittee. Specifically, we agreed with your office to determine whether mischarges like those disclosed by TRW at its Military Electronics Division (MED) in San Diego involving misclassification of contract costs as independent research and development (IR&D) charges were also present at TRW's Space Park facility. You also asked that we look at matters relating to internal controls at TRW. These included the scope of work and number of auditors in TRW's internal audit department, the nature and extent of TRW's compliance audit program, and the role of TRW's audit committee. We also agreed to examine (1) the extent of audit work done by TRW's external auditors in looking at the government sector of TRW's business and (2) whether external auditors audited classified contracts.

Our review of charges to selected contracts and projects at TRW's Space Park facility in Redondo Beach, California, headquarters for the company's defense sector, did not disclose improper charging or violations of law. TRW officials, who had reported the problems at MED in San Diego under TRW's voluntary self-review program, informed us that their reviews at Space Park also found no charging problems. The Defense Contract Audit Agency (DCAA) reported that it found a limited amount of misclassified labor charges at Space Park. TRW disagreed with the DCAA report, and the matter has been referred to officials at the Air Force Plant Representative Office for resolution.

We judged that examinations of TRW's defense sector by its external auditor, Ernst & Whinney, as well as by its internal auditors included very little testing of controls in some areas of special interest to the government, such as charging practices and compliance with federal requirements. TRW has since hired additional internal auditors and broadened its internal audit coverage of defense business. TRW has also taken many actions in recent years to strengthen the company's internal

controls and charging practices. Ernst & Whinney's scope of audit included selecting five classified contracts for review. Ernst & Whinney advised us that it has the necessary clearances and has been able to obtain access to any information or documentation needed to audit government contracts.

Background on TRW and Its Defense Business

TRW, Inc., is an international company with about 78,000 employees in 24 countries; it ranks 61st in the latest Fortune 500 directory of American industrial corporations. Headquartered in Cleveland, the company has two major business segments: the Space and Defense Sector with 45 percent (\$3.1 billion) and the Automotive Sector with 40 percent (\$2.7 billion) of the company's 1987 sales of \$6.8 billion. Smaller segments that include energy-related and information systems businesses accounted for the remaining 15 percent or about \$1 billion of 1987 sales. TRW's 1987 sales to the government totaled \$3 billion, all but \$49 million of which were made by the Space and Defense Sector.

TRW's aerospace and electronics businesses produce and sell sophisticated, state-of-the-art products and services primarily to defense and space customers. Most of TRW's government contracts are cost-reimbursement type, and labor is a significant element of cost in TRW's contracts. TRW's defense sector annually incurs about \$1 billion in labor costs.

TRW performs research and development (R&D) to advance technology in order to develop new products or services for sale. This work may be performed either under contract or independently. Federal regulations refer to the portion of a contractor's R&D "which is not sponsored by, or required in performance of, a contract or grant" as independent research and development. Bid and proposal (B&P) costs represent a later stage in a contractor's efforts to develop and market new products, a stage when the contractor responds to a customer's specific needs or anticipates and proposes a solution to a specific problem.

Large contractors, like TRW, are required to negotiate advance agreements annually with the Defense Department to establish a ceiling for recovering IR&D and B&P costs. Costs above the ceiling are not allowed to be allocated to government contracts. In each of the years 1983 through 1987, TRW reported that it incurred substantially more IR&D and B&P costs than had been negotiated in annual advance agreements with the government. These costs cannot be charged to the government.

TRW's Self-investigations and Questions Raised About Its Management of Government Contracts

In recent years, TRW has conducted several internal investigations based on allegations made by employees or anonymous sources which, in some cases, confirmed the presence of irregularities or misconduct at certain company locations.

In 1984, TRW reported on improprieties it had uncovered at two locations: its former Aircraft Components Group in Cleveland and Electronic Products, Inc., a Colorado Springs subsidiary. In Cleveland, company investigators found irregularities involving the Aircraft Components Group's certification of cost data. The Colorado investigation disclosed several problems including mischarging contract labor costs to overhead accounts.

In 1986, TRW also reported to the Defense Department on company investigations at two other locations: TRW Microwave, Inc., a former subsidiary in Sunnyvale, California, and the Military Electronics Division (now the Military Electronics and Avionics Division) in San Diego. TRW investigators concluded that several charges at TRW Microwave, Inc., were not in accordance with applicable policy and requirements. Investigators at MED found several problems, including the mischarging of contract costs to IR&D accounts.

In September 1987, TRW entered into an administrative settlement with the government in which it agreed to pay \$17 million as estimated restitution for the matters investigated at the four locations. In August 1988, the company settled criminal charges relating to matters at the Aircraft Components Group by pleading guilty to three counts of conspiracy to defraud the government and paying criminal fines and penalties of \$3 million.

MED in San Diego, like two of the other three locations investigated and reported on by TRW, is a part of the company's Space and Defense Sector, headquartered at Space Park. Since MED is a line unit in the sector and shares the sector's accounting system, questions arose at congressional hearings about whether mischarges like those found at MED were also present at Space Park.

Questions Raised About TRW's Charging Practices and Audit Policies at March 1987 Hearings

On March 4 and 5, 1987, the House Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, held hearings to evaluate TRW's management of government contracts. The Subcommittee heard sometimes conflicting testimony on the company's charging practices, adequacy of internal controls, and other matters from former

company employees, TRW's chief executive officer (now retired), and others.

Dismissed managers from TRW testified that the charging practices TRW investigated and reported on at MED in San Diego involving IR&D, B&P, and other accounts were no different from practices followed elsewhere in the Space and Defense Sector. TRW's now retired chief executive officer testified that this was not the case and that company reviews of charging practices at Space Park confirmed that "the practices in San Diego and those in Redondo Beach [Space Park] were vastly different."

Questions were also raised about the extent to which internal auditors reviewed TRW's defense business. A former assistant to the company controller testified that TRW reduced the size of its internal audit staff in recent years and that these staff, in any case, "never audited government contracts." The then chief executive officer testified that the former employee's testimony was incorrect and that about 40 percent of the internal auditors' time was devoted to reviewing government contracts. He also stated in reference to TRW's compliance audit program, which is separate from TRW's internal audit operation, that the Space and Defense Sector in recent years had expanded its own audit efforts from an equivalent of 27 staff years in 1982 to 123 in 1986.

Objectives, Scope, and Methodology

To determine whether mischarges like those disclosed by TRW at its MED in San Diego were present elsewhere in the company's defense sector, we examined selected contract and indirect charge account project files and other records at Space Park. The indirect charge projects examined included IR&D, B&P, and other indirect technical effort. We also obtained information on recent work by TRW and DCAA to review Space Park charging practices.

We examined the work done to review TRW's defense sector by (1) its internal auditors, (2) its outside auditor, (3) company personnel who perform compliance audits, and (4) DCAA. We also examined matters related to internal control and the role of TRW's board of directors' audit committee. We performed our review in accordance with generally accepted government auditing standards. Appendix I provides details on our objectives, scope, and methodology.

We Found No Mischarges at Space Park Like Those TRW Found at MED

Our review of 33 indirect charge projects and 24 cost-type R&D contracts and related IR&D projects at Space Park disclosed no improper charges.

The 33 indirect charge projects included 6 IR&D, 1 B&P, and 26 other indirect technical effort projects. We selected the six IR&D and one B&P projects because of expenditure reductions in the last 3 months of the accounting period or other unusual expenditure patterns. We found no indications that the year-end expenditure reductions involved questionable labor charges.

We judgementally selected and then reviewed the 26 other indirect technical effort projects to determine whether there were any misclassifications of IR&D and B&P activities as other indirect technical effort (long-range marketing or the evaluation and improvement of plant methods and processes). R&D can be classified as other indirect technical effort if it is used in the manufacture or processing of a product for sale or as IR&D if it becomes part of a product for sale. Since there is no ceiling on other indirect technical effort costs and TRW was over ceiling on IR&D and B&P, any charges made to other indirect technical effort that should have been made to IR&D or B&P would have been paid by the government when they should not have been. We found no case where IR&D or B&P costs were misclassified as other indirect technical effort.

Finally, we found no improper charges in our review of the 24 cost-type R&D contracts and related IR&D projects. We selected contracts whose areas of technology appeared related to those of concurrent IR&D projects and whose managers also managed IR&D projects.

Other Reviews of Space Park Charging Practices

In addition to our review of selected projects discussed above, we inquired as to the results of reviews by TRW and DCAA of Space Park charging practices.

TRW's Reviews

We discussed with company representatives TRW's self-reviews of Space Park charging practices referred to in the former chief executive officer's testimony. They told us that company reviews at Space Park disclosed no problems like those reported in its investigation report on MED. TRW's Space Park reviews included

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- legal reviews in 1985 and 1986 to address managers' inquiries on the propriety of IR&D, B&P, and related charging practices;
 - investigations of charging practices at two divisions in 1985;
 - following up on company hotline allegations;
 - reviewing a Space Park contract and related IR&D project cited by a former MED manager as having problems like those disclosed at MED; and
 - forming a task force to review charging practices and develop guidelines on them.

DCAA's Review

As part of a comprehensive labor audit at TRW's Space and Defense Sector, DCAA reported in May 1988 that a review of direct and indirect labor charged to final cost objectives at Space Park disclosed misclassifications of labor effort. The questioned costs totaled \$4.9 million, including IR&D and contract effort misclassified as capital fabrication, IR&D and B&P as other indirect technical effort, and contract effort as IR&D. In a written response to a draft of the report, TRW disagreed with DCAA's determinations. The contractor said that DCAA incorrectly interpreted applicable federal regulations. We have not reviewed DCAA's work or the basis for TRW's objections to its May 1988 report. These matters were referred to officials at the Air Force Plant Representative Office for resolution.

TRW's Internal Audit Program

You asked that we look at the scope of work and number of auditors in TRW's internal audit department. The department is located at company headquarters in Cleveland and is headed by a vice president of internal audit. This vice president reports administratively to the chief financial officer and has direct access to the board of directors' audit committee and the chief executive officer. The department's charter states that the internal audit department is responsible for determining whether the company's systems of internal control reasonably ensure the accuracy of its financial statements and safeguard its assets. It also states that the department is responsible for determining whether control systems are adequate to ensure compliance with the financial and accounting requirements of laws and regulations including those pertaining to government contracts.

Our review showed that until recently, TRW's internal auditors did not often evaluate controls in areas of special interest to the government. In 1987, internal auditors began to expand their work in these areas. Also in 1987, TRW reestablished its Space Park suboffice.

Internal Control Reviews

For the 5 years 1982 through 1986, the internal audit department conducted 268¹ audits at government contract locations and 874 audits at nongovernment business locations. The internal auditors spent an estimated 39 percent of their time performing audits at government contract locations in 1986, a year when government sales were 45 percent of corporate sales. TRW officials explained that this ratio is not significant because audits at commercial locations take more time. The commercial locations are geographically dispersed and involve several decentralized accounting systems; the defense sector has primarily one accounting system. Department officials did not record auditors' time for earlier years and could provide no estimates.

We looked at the work of TRW's internal audit to see what internal controls it evaluated and whether its auditors evaluated areas of special interest to the government. While the auditors regularly tested and evaluated defense locations' internal controls relating to standard accounting functions and transaction cycles, they rarely evaluated the controls in areas of special interest to the government such as labor charging and labor cost accumulation and allocation systems. We believe these controls are important because labor is a significant element of cost in TRW's government contracts.

Several audits reported on controls in areas such as labor rates, payroll, and signature authorizations. However, we identified only five audits that tested the controls relating to labor cost accumulation and distribution systems to ensure that the costs are accurately charged to contracts or other cost objectives such as IR&D projects.

Six audits evaluated individual government contracts. In the two of these six audits for which we reviewed the working papers, the auditors evaluated contract revenues, billings, and costs. However, these reviews did not include detailed testing of transactions to determine if labor costs charged to the contracts or other accounts met federal requirements.

¹In September 1988, in response to a question from GAO, TRW amended from 268 to 308 the number of audits it identified as having been performed at government contract locations during the years 1982 through 1986. TRW explained that the principal differences related to the years 1983 and 1984 and were due to (1) audit activity that occurred but was not reflected in records which we earlier reviewed and (2) different definitions and interpretations of what constitutes an audit and a government contract location. We did not review the additional reports.

Changes in Internal Audit Staff Size

In 1985 and 1986, TRW reduced the size of its internal audit staff because of the divestiture of businesses accounting for approximately \$700 million of net sales in 1984 and closed its internal audit suboffice at Space Park. According to TRW officials, the suboffice was closed in 1985 because it was not operating effectively with low staff levels, the internal audit department could not get authorization to hire more staff, and it was difficult to manage from a distance. After the suboffice was closed, auditors continued to audit Space Park locations from Cleveland. The highest staffing levels occurred in 1983 and 1984 when the internal audit department had 37 professional staff; the lowest level was reached in September 1987 when the department had 24 staff.

In 1987, TRW reestablished the Space Park suboffice. As of June 1988, 11 of the proposed staff of 18 had been hired for the Space Park Suboffice. The Cleveland office had 26 internal auditors as of June 1988, for a total of 37 auditors. The internal audit department also began in 1987 to expand the scope of its reviews at government contract locations to address issues such as labor charging and contract compliance.

Space and Defense Sector's Compliance Audit Program

TRW's Space and Defense Sector operates a compliance audit program under which sector staff, who are not internal auditors, conduct reviews or self-audits. These reviews assess the units' compliance with the sector's core manuals. The manuals contain policies and procedures covering 14 management systems or functions shared by the sector's five groups, such as contracts, health and safety, procurement, security, and controller activities.

Each of the sector's groups is responsible for performing compliance audits, and group staff are normally assigned on a part-time basis to perform them. Management has discretion to assign staff to perform the evaluations and has assigned staff to review each of the 14 identified management systems and functions, including the controllership function. Reviews of this function include evaluating compliance with policies and procedures to ensure proper charging practices.

TRW's then chief executive officer testified that the Space and Defense Sector spent 123 staff years of audit effort in 1986 reviewing government contracts. He acknowledged that this was an equivalent number because the staff were not full time. TRW officials informed us that this was an estimate for which specific and auditable statistical data are not readily available and that 23 of the staff years represented effort devoted to internal investigations.

The estimated 100 staff years in 1986 (those remaining after subtracting the 23 staff years devoted to internal investigations) was composed of reviews in the following nine areas.

Table 1: Compliance Review Areas

Subject	Staff years
Time charging	31
Procurement	30
Controller activities	18
Property	7
Pricing	4
Project management	4
Administration	4
Contracts	1
Resources management	1

Since the personnel who perform these reviews normally function as line or staff employees and work for managers whose operations they review, the compliance audit program functions as a management self-evaluation rather than as a traditional audit function performed by independent reviewers. Therefore, the former chief executive officer's testimony on the program was based on data that may have overstated the effort spent reviewing contracts and related audit areas.

Role of TRW's Board of Directors' Audit Committee

One important element of a good internal control structure is the audit committee. TRW's board of directors has an independent audit committee made up of four directors who are not members of management, which meets each year in February, July, and October (and at other times as needed) to consider audit related matters. Under its charter, the committee is responsible for reviewing (1) the engagement of the company's independent auditors, (2) the nature and scope of these auditors' planned work and their work results, (3) the nature, scope, and results of the company's internal audit program, (4) the company's internal accounting controls including significant weaknesses and management's corrective actions, and (5) the company's annual financial statements certified by the independent auditors.

We met with the audit committee chairman and a committee member to discuss the committee's role. We also reviewed the minutes of selected committee meetings to further assess the committee's activities.

We found that the audit committee members met with Ernst & Whinney and internal audit department representatives and senior company management to discuss the auditors' work and related matters. The committee members also met privately with the auditors when management was not present. The members did not meet with DCAA representatives, but management has briefed them on DCAA's work. The committee does not have its own staff but has authority to hire outside attorneys should the need arise. Committee members told us the committee has not exercised this authority.

The audit committee reviews Ernst & Whinney's and the internal auditors' audit plans, scope of work, and audit findings and results. It approves the auditors' plans and, according to the committee members with whom we spoke, has not recommended any changes in the scope of the auditors' planned work. Committee members also discuss the company's accounting and administrative internal controls with the auditors. The members did not recall specifically discussing labor charging practices with the auditors; however, they noted that this topic would have been part of a general discussion of controls.

We also found that senior company management, including the company's chief executive officer and general counsel, and outside counsel hired by management have briefed the audit committee on the company's self-investigations. The committee members told us that, based on these briefings, they believe the company has been fully responsive in performing the investigations and has made full and complete disclosures. They also said that nothing brought to their attention suggests that the problems TRW found in San Diego are present at Space Park.

Role of Ernst & Whinney, TRW's Outside Auditor

You asked us to review the extent of audit work done by TRW's external auditors regarding the government sector of TRW's business and whether they audit classified contracts. To assess the role of TRW's outside auditor, Ernst & Whinney (E&W), we reviewed the work E&W did to evaluate financial statements for the company's defense sector in 1986, the most recent available completed audit year at the time of our review. We did not find violations of generally accepted auditing standards nor did we find anything that would indicate that E&W's opinion on TRW's consolidated financial statements was improper. We did judge, however, that the outside auditor's examination of TRW's defense sector did not include sufficient work to provide a basis for assessing the adequacy of TRW's charging practices or its compliance with federal procurement and contracting requirements.

Our review, while encompassing all the work done by E&W to review TRW's defense sector, focused on the work done to evaluate and test internal controls; assure compliance with laws, regulations, and contract terms; and review charging practices and contract charges. Our review of the working papers E&W prepared for its audit led us to question the degree of emphasis, scope, and amount of work done in a number of areas of special interest to the government because of their impact on charging practices and compliance with government rules and regulations. The areas are

- the extent to which the system of internal control was documented, understood, and tested;
- the extent of work done to ensure compliance with laws, regulations, and contract terms and whether internal control systems were adequate in these areas;
- whether enough audit work was done to ensure that only appropriate costs were charged to contracts either through evaluation of the cost accounting system and controls or through direct or indirect testing of costs charged to individual contracts;
- the extent of analytical work done on contracts; and
- the extent of actions taken in response to TRW's self-investigation reports, which disclosed problems in charging IR&D and B&P.

Internal Control System

Internal control is an important area and one that the auditor must understand to plan the audit properly. We judged that E&W's working papers did not adequately document TRW's system of internal control and how the system works in areas related to government contracting. When internal control weaknesses or potential areas for improvement are identified, they are reported to management in a letter commonly referred to as a management letter. E&W's 1986 management letter had over 100 pages, but only 4 of the pages related to the Space and Defense Sector; and these few pages discussed the controls at one company subsidiary with its own accounting system. The letter contained no information on controls at Space Park, headquarters for TRW's defense business. Space Park accounted for over 40 percent of the company's net sales.

Compliance With Laws and Regulations

We found almost no mention of government rules and regulations from the Federal Acquisition Regulation and the Federal Acquisition Regulation Supplements in the working papers E&W prepared for its 1986 audit of TRW's defense business.

The Cost Accounting System

We found little evidence that the auditors tested the company's cost accounting system to ensure that costs were correctly and accurately being charged to contracts or other cost objectives such as IR&D projects. The working papers noted that "proper job charging is one of the areas under close scrutiny by the DCAA, especially any indications of cross-charging between fixed price and cost type contracts," and E&W judged the likelihood of material error in affected accounts to be "low." We find this judgment hard to support given the importance and complexity of this area in defense contracting, the dollar amounts involved, and the charging irregularities disclosed in TRW's self-investigations, of which E&W officials were aware at the time of the audit.

E&W's payroll disbursements test was the same as testing on any commercial audit. The only control tested to ensure correct labor charging was whether supervisors initialed employees' time cards. Other controls and procedures were not reviewed, including the contractor's systems for disposing of unmatched labor charges (those where employees had charged invalid job numbers) or transferring charges between cost objectives.

Individual Contract Charges

We also found little work to assess the validity of charges to individual contracts. E&W sampled 25 significant contracts, 5 of which were classified, to test contract revenue and 25 others to test certain aspects of revenue recording and billing. We discussed the work done to evaluate one of these contracts with E&W officials, who told us they considered the audit work done to review the contract to be representative of work done on all the other contracts. We found that the work consisted of an analysis of cost differences or variances over time rather than a testing and validation of the costs charged to the contract. Rather large cost variances were not commented upon or analyzed. E&W officials agreed that the auditors had not performed a detailed cost input test or cost validation on the contract.

Self-investigation Reports

During E&W's 1986 audit, TRW issued two self-investigation reports—one on former subsidiary TRW Microwave, Inc., on June 19, 1986, and another on its Military Electronics Division in San Diego on December 5, 1986—which disclosed problems with charging IR&D and B&P. E&W officials told us that they did not review these reports in connection with the 1986 audit because the reports were subject to the attorney-client privilege. Subsequently, E&W auditors looked at the reports but did not look at any supporting materials or working papers. E&W officials told us

that during the 1986 audit they met with TRW's financial and legal staff to discuss these matters. However, they did not document these discussions in their working papers. E&W did not, as a result of the problems disclosed in the company's self-investigation reports, expand the scope of its audit to evaluate company charging practices involving IR&D and B&P.

Industry Audit Guide

In performing an audit, the auditor follows American Institute of Certified Public Accountants (AICPA) standards. AICPA has issued industry audit guides which provide authoritative guidance for audits of specific industries. AICPA's industry audit guide, Audits of Government Contractors, which is relevant to Ernst & Whinney's audit of TRW, has not been updated since 1975.

AICPA recognizes that auditing a government contractor's financial statements may be different from auditing a typical commercial enterprise and may require special procedures because of the contractor's obligation to comply with contract provisions and various applicable government regulations. In the draft revision to its 1975 industry audit guide, Audits of Government Contractors, AICPA has increased its emphasis on the pervasive impact of government regulations on the contractor's operations, accounting practices, and cost recoverability and the importance of contractor controls to ensure compliance. The revision to this guide has been underway for over 3 years.

Audits of government contractors could be improved if the relevant audit guide were current. In our March 6, 1989, report entitled CPA Audit Quality: Status of Actions Taken To Improve Auditing and Financial Reporting of Public Companies, (GAO/AFMD-89-38), we recommended that AICPA expedite the revision of this and other industry audit guides.

TRW's Actions to Strengthen Internal Controls

Beginning as far back as the late 1970s, in response to the Foreign Corrupt Practices Act of 1977, TRW formed a task force to assess its compliance with the act and to perform a comprehensive review of its controls environment. The task force concluded that the organization and operating controls employed by the company created a strong control environment. During our review, we noted that TRW management had taken many actions in recent years to strengthen the company's internal controls and charging practices. The actions include substantially revising company policies and procedures, communicating and

instructing employees on company policies and government requirements, redeploying staff resources, refocusing employee responsibilities, and strengthening management oversight through the creation of boards or committees to monitor charging practices and compliance-related activities. As part of this effort, TRW established a hotline enabling its defense sector employees to raise legal and ethical conduct questions and concerns outside their normal line or functional management reporting chain.

Conclusions

Based on our review, we have no reason to conclude that the charging irregularities TRW found at its Military Electronics Division in San Diego are present in Space Park.

Until recently, TRW's internal auditors did not sufficiently review areas of special interest to the government, such as the company's charging practices and compliance with federal requirements. TRW has hired additional audit staff and upgraded its audit program by broadening its coverage of the defense business. We believe these actions and the work being done by company staff performing compliance audits will provide TRW management and the federal government greater assurance that the company is complying with federal requirements.

With regard to the role of the audit committee, we found that TRW's board of directors' audit committee primarily depends on briefings it receives from company management, the internal auditors, and the outside auditor for information. The committee has conducted no independent reviews, and this is within the committee's discretion. However, we believe that as a general rule, an audit committee's effectiveness can be enhanced if it exercises its authority to conduct independent reviews.

We did not find violations of generally accepted auditing standards nor did we find anything that would indicate that E&W's opinion on TRW's consolidated financial statements was improper. We did judge however, that Ernst & Whinney's 1986 audit of TRW's defense sector provided the company and the government little assurance that the company's controls for assigning costs to contracts or other accounts were functioning properly to ensure compliance with federal requirements. These controls are important in a public accountant's audit of a defense contractor because noncompliance with the requirements can directly and materially affect the contractor's financial statements. We believe that TRW and its audit committee should ensure that future independent audits of

TRW include sufficient review of areas of special interest to the government, especially those involving cost accounting issues.

In recent years, TRW has taken many actions to strengthen its internal controls and charging practices, including revising company policies and procedures, redeploying staff resources, and strengthening management oversight through the creation of boards or committees to monitor charging practices and compliance-related activities.

Agency Comments and Our Evaluation

We obtained written comments on a draft of this report from TRW and Ernst & Whinney officials. Copies of their letters to us and GAO's comments on them are included in appendixes II and III. TRW generally agreed with the report and considered it balanced and objective. TRW addressed a number of issues to provide additional information and clarify the company's views. Ernst & Whinney officials, in commenting on the sections of the report dealing with their firm, disagreed with the draft. They stated that an audit conducted in accordance with generally accepted auditing standards is not intended or designed specifically to cover all areas of special interest to the government, such as charging practices and compliance with government requirements. The draft has been revised to make clear that we did not find violations of generally accepted auditing standards. However, we continue to believe that these areas are important to an audit of a defense contractor. Charging practices are particularly significant in auditing TRW because TRW's defense sector annually incurs about \$1 billion in labor costs and TRW had previously disclosed problems with charging labor costs.

Unless you publicly announce the contents of this report earlier, we will not release it until 30 days from its date. At that time, we will send copies to interested parties and make copies available to others upon request.

Sincerely yours,



Brian P. Crowley
Acting Assistant
Comptroller General

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Abbreviations

B&P	bid and proposal
DCAA	Defense Contract Audit Agency
E&W	Ernst & Whinney
GAO	General Accounting Office
IR&D	independent research and development
MED	Military Electronics Division
R&D	research and development

Objectives, Scope, and Methodology

Our principal objectives were to determine (1) whether mischarges like those disclosed by TRW at its Military Electronics Division in San Diego involving the misclassification of contract costs as IR&D charges were present in other Space and Defense Sector divisions at Space Park, (2) what internal control weaknesses in-house or outside auditors or reviewers may have identified in the Space and Defense Sector in recent years, and (3) these auditors' and reviewers' roles and the extent and scope of their work. We did not perform a comprehensive review of TRW's internal controls and, as a result, do not express an opinion on their adequacy.

Mischarges

To determine whether mischarges like those disclosed by TRW at MED were present at Space Park, we (1) reviewed selected contract and indirect charge account project files and other records at selected Space Park divisions, (2) discussed with DCAA representatives recent work they performed at Space Park to review charging practices including charges to IR&D accounts, and (3) discussed, with company representatives, TRW's reviews of Space Park charging practices cited in the now-retired chief executive officer's testimony.

We performed our review at Space Park in two phases. In the first phase, we reviewed judgementally selected indirect charge accounts (IR&D, B&P, and other indirect technical effort projects) to determine whether labor charges were properly classified, accurate, and correct. In the second phase, we reviewed judgementally selected R&D contracts to determine whether work required by the contracts was correctly charged to the contracts or mischarged as IR&D. We undertook the second phase of our review based on a discussion we had with former managers of MED and the Electronic Systems Group, of which MED is a component. They suggested that we review small, cost-type R&D contracts having no cost extensions to find cases in which IR&D funds were used to solve technical problems on contracts.

In the first phase of our review, we identified IR&D and B&P projects with significant cumulative expenditures at the end of 1986; for further review, we selected six IR&D projects and one B&P project with expenditure reductions in the last 3 months of the year. We coordinated our selection with DCAA, which was performing a review of IR&D and B&P projects, to avoid duplicative effort. Since DCAA made its selection before we made ours, we found only one B&P project that met our criteria for further review.

For the selected IR&D and B&P projects, we analyzed accounting records to determine whether they contained adjustments, labor cost transfers, or unusual labor charging patterns. We examined employees' work authorizations and IR&D progress reports to determine whether employee labor charges were consistent with reported project activities. We also reviewed employees' charges to other cost objectives such as contracts or other indirect technical effort and compared the various projects' and contracts' task statements to determine whether employees could have misclassified IR&D and B&P efforts as other indirect technical effort or contract effort.

In addition, we judgmentally selected for review 26 other indirect technical effort projects begun in the last quarter of 1986 at three Space Park divisions. We examined the other indirect technical effort project authorizations, task descriptions, and activity reports to determine whether the projects complied with TRW policy. We also reviewed labor charges to determine whether employees were involved in IR&D and B&P projects prior to or concurrent with the other indirect technical effort project performance periods. We compared these projects' task descriptions and accomplishments with those of the other indirect technical effort projects to determine whether IR&D and B&P effort could have been misclassified as other indirect technical effort.

In the second phase of our review, we judgmentally selected 24 cost-reimbursement-type R&D contracts to review at two Space Park divisions: the Applied Technology Division in the Space and Technology Group and the Electronics and Technology Division in the Electronic Systems Group. We selected contracts whose areas of technology appeared related to those of concurrent IR&D projects and whose management also managed IR&D projects. When we made our selection in October 1987, the Space and Defense Sector had about 1,100 contracts.

For the selected cost-type contracts, we reviewed documentation in contract files such as statements of work, monthly and final technical progress reports, monthly financial reports, contract modifications, sales number briefs, initial bid decision records, proposal briefing documents, internal and external contract correspondence, proposal sign-off documents, and technical proposals submitted to procurement offices. We compared technical progress reported in contract reports with progress reported in IR&D reports and analyzed labor charges to determine whether charging patterns were consistent with reported technical progress. We discussed questions we had with TRW representatives, and

they provided many additional documents, including written responses to the questions, which we further reviewed.

Internal Audit

Our objectives in reviewing TRW's internal audit department were to determine (1) the size and location of staff resources and the portion of total audit work done at locations involved with government contracts during the 5 years 1982 through 1986, (2) whether the auditors evaluated the company's internal controls at those locations, (3) which controls they evaluated, and (4) whether they evaluated areas of special interest to the government such as individual contracts and labor cost accumulation and distribution systems.

We identified, categorized, and reviewed the type of work involved in all 268² internal audits at government contract locations for the 5 years 1982 through 1986 and judgmentally selected 7 audits for an in-depth review. We did not review the audits performed by the department at TRW's nongovernment business locations. We also interviewed department officials and reviewed other documents to determine what work was underway at the time of our review and plans for future audit efforts. We did not assess the quality of individual audits or perform an overall quality review or assessment of the department.

In his March 1987 testimony, TRW's former chief executive officer (now retired) discussed the audit work done by Space and Defense Sector personnel. Because his testimony appeared to conflict with that of a former TRW employee, we obtained information on the sector's audit program, such as its size and structure, the nature of the audits performed, who performed the audits, and whether auditors reviewed sector charging practices. We discussed the program with knowledgeable TRW staff, reviewed selected audit reports to determine what was audited, and obtained written explanations on certain matters addressed in the former chief executive officer's testimony such as the number of staff years devoted to these audits.

²In September 1988, in response to a question from GAO, TRW amended from 268 to 308 the number of audits it identified as having been performed at government contract locations during the years 1982 through 1986. TRW explained that the principal differences related to the years 1983 and 1984 and were due to (1) audit activity that occurred but was not reflected in records which we earlier reviewed and (2) different definitions and interpretations of what constitutes an audit and a government contract location. We did not review the additional reports.

Auditors' and Reviewers' Roles

We also determined what work the Defense Contract Audit Agency has performed in recent years at Space Park and what work was underway at the time of our review. We reviewed audit reports issued by DCAA since 1982 on Space Park charging practices and discussed DCAA's current work at Space Park, including its review of IR&D accounts, with DCAA representatives on several occasions.

To understand the role of TRW's board of directors' audit committee, we interviewed the committee chairman and a committee member and reviewed the minutes of selected committee meetings to determine whether the committee members met with Ernst & Whinney, internal audit department, and DCAA representatives; how often they met; what they discussed; and whether they reviewed TRW's self-investigations.

Our review of Ernst & Whinney's work to assess TRW's internal controls focused on the work the outside auditor did in 1986—the most recent available audit year at the time of our review—to examine TRW's Space and Defense Sector. Our objectives were to determine the extent and scope of the work, whether areas of special interest to the government were audited, and whether external auditors audited classified contracts.

We examined the working papers Ernst & Whinney prepared for this audit and discussed, with Ernst & Whinney and TRW officials, the work that was done. While including all the work done to review the company's defense sector, our review focused on the auditor's evaluation of TRW's internal controls, compliance with government regulations and contract terms, and charging practices. We looked, specifically, for substantive work by the auditors in such areas as (1) staff knowledge and testing of company controls, systems, and procedures in areas related to government contracting, (2) specific tests of internal control systems, particularly those involving contract charges, (3) the company's cost accounting system and whether it assures proper charging to contracts and compliance with laws and regulations, (4) testing controls and charging practices involving IR&D, B&P, and other overhead accounts, (5) company procedures and controls for ensuring contractually correct labor charging practices, (6) staff knowledge of company reviews or reviews by outside auditors or reviewers, such as DCAA, of the company's labor charging and cost accounting practices, (7) analytical reviews of contract amounts and charges, and (8) tests of the content and validity of charges to individual jobs and accounts.

Some materials were removed from the working papers at TRW's request because they contained classified data or data considered to be sensitive or proprietary such as contract and overhead reserves, salary amounts, contract fee schedules and projections, and overhead rates. Since our objective was to determine the extent and scope of Ernst & Whinney's work rather than the details of what it examined and since we obtained explanations of the materials removed from the working papers, their removal did not prevent us from accomplishing our objectives.

We held extensive interviews with TRW officials and representatives to discuss the company's internal controls, actions to strengthen the controls, company investigations including the investigation at MED, and several other matters including the company's reviews of Space Park charging practices. We received detailed briefings on these matters and written explanations on matters for which we requested further clarification.

To gain a thorough understanding of the issues raised about TRW's defense sector, we also interviewed selected former TRW employees, some of whom testified at the March 1987 hearings, to obtain their views on the company's charging practices, internal controls, self-investigations, and related matters.

The only significant area where we did not obtain information for our review involves TRW's self-investigations. The company maintains that documentation underlying these investigations is subject to the attorney-client privilege, that is, they are protected from disclosure because of the confidential relationship between the attorney and client. Also, some of the investigations were then under review by grand juries and were associated with litigation between various parties. As a result, the company felt it would be inappropriate to provide us detailed data on them. Because we concluded that we were able to accomplish our objective in this area with the summary data and briefings provided by TRW officials, we did not take issue with TRW's position.

We performed our review between April 1987 and April 1988 in accordance with generally accepted government auditing standards in Washington, D.C., at TRW headquarters in Cleveland, at Space Park in Redondo Beach, and at the Ernst & Whinney office in Los Angeles.

Comments From TRW, Inc.

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



TRW Inc.

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William B. Lawrence
Vice President &
Assistant General Counsel

May 12, 1989

Mr. Frederick D. Wolf
Assistant Comptroller General
Accounting and Financial Management Division
United States General Accounting Office
Room 6001
441 G Street, N.W.
Washington, D. C. 20548

Dear Mr. Wolf:

This letter is in response to your request for written comments on a GAO draft report dealing with TRW's internal controls and charging practices, a copy of which was delivered to us under cover of your letter dated March 17, 1989.

We understand that changes have been made in the draft report which reflect in part previous discussions we have had with your staff. The comments set forth below, therefore, assume that such changes in fact have been made.

As we previously have indicated, on the whole we find the approach taken in the draft report to be balanced and objective. We also are in agreement with many of the statements and conclusions set forth in the draft report. There are, however, a number of issues we would like to address to make clear the Company's views. With that purpose in mind, we offer the following comments:

1. Adequacy of Internal Controls. The Company believes that it has acted responsibly

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for well over a decade in reviewing and strengthening its system of internal controls. In the late 1970's and early 1980's, for example, TRW initiated a series of actions directed at evaluating and strengthening its internal controls. As a result, TRW evaluated and took action during this period with respect to: the role and responsibility of Directors and Director Committees; the use and distribution of corporate policy statements; documentation and dissemination of financial and accounting standards, procedures and controls; and the use of auditing and monitoring techniques. These actions contributed to a strong internal control environment, which enabled TRW management to detect the problems that were investigated and voluntarily disclosed by TRW.

2. Testimony Before Subcommittee. The Company believes that testimony before the Subcommittee by TRW's Chief Executive Officer accurately reflected available data, and that such data fairly reflects compliance audit activities devoted by the Company to government contracts. Identification of these activities in the hearings was sorely needed in order to correct the wholly inaccurate and misleading testimony of other witnesses.

3. TRW Audit Committee. TRW's Audit Committee has direct access to and regularly uses in-house financial and legal resources in performing its duties. The Committee has taken a leadership role in reviewing TRW's internal controls, including internal and external audit processes and programs designed to help ensure compliance with government contracting requirements. The Committee has been fully satisfied with the Company's handling of its self-investigations and voluntary disclosures based on a Committee review of such matters that included meetings with and briefings by responsible senior management and legal personnel, including

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May 12, 1989

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private sessions with members of four (4) separate outside law firms involved in the self-investigations.

4. Compliance Audit Activities. Significant attention has been and is being devoted by TRW to ensuring a strong internal controls environment, including matters that may be of special interest to the Government, such as labor charging and labor cost and allocation systems. Virtually the entire compliance audit program at TRW's Space & Defense Sector, involving over 100 equivalent man years of annual effort, for example, has been and is being directed at ensuring compliance with policies and procedures that are derived from government contracting requirements. The compliance-related activities carried out by TRW's internal audit department have been and are designed to augment these more extensive efforts.

5. Role of Ernst & Whinney. The Company has discussed with Ernst & Whinney the comments set forth in the draft report which relate to them. We also have reviewed Ernst & Whinney's written response to the draft report dated April 14, 1989, and we generally concur with the comments set forth therein. Without attempting in any way to duplicate those comments, we would like to emphasize the following:

(a) We disagree with the conclusions set forth in the draft report to the effect that the external auditors did not have sufficient security clearances with which to conduct their audits. For the reasons set forth in detail in TRW's letter to the GAO dated December 15, 1987, we believe that this conclusion is inaccurate.

(b) We also object to any implication set forth in the GAO draft report to the effect that the activities carried out by

See comment 1.

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Ernst & Whinney were not in conformity with Generally Accepted Auditing Standards ("GAAS"). TRW engaged Ernst & Whinney to perform an audit in accordance with GAAS, and based on our discussions with Ernst & Whinney and advice provided by them, we believe that the procedures performed by the firm complied fully with GAAS.

We very much appreciate the opportunity provided by you and your staff for comment, and we respectfully request that a reasonable effort be made in the final report to summarize fairly the Company's views. Please contact me if I can be of additional assistance.

Sincerely,



William B. Lawrence

The following are GAO's comments on TRW's letter dated May 12, 1989.

GAO Comments

1. Information on the Ernst & Whinney audit is included in notes to appendix III.

Comments From Ernst & Whinney

Note: GAO comments supplementing those in the report text appear at the end of this appendix.



1300 Huntington Building
Cleveland, Ohio 44115
216/861-5000

April 14, 1989

Mr. Frederick D. Wolf
Assistant Comptroller General
Accounting and Financial Management Division
United States General Accounting Office
Room 6001
441 G. Street, N.W.
Washington, D.C. 20548

Dear Mr. Wolf:

This letter responds to your request for comments on the draft report entitled GOVERNMENT CONTRACTORS: Internal Controls and Charging Practices at TRW Inc. As stated in the draft report, the purpose of your review was to determine whether mischarges like those disclosed by TRW at its Military Electronics Division in San Diego were also present at TRW's Space Park Facility. You also looked at matters relating to the internal controls at TRW's Space Park Facility, including work performed by the internal and external auditors. Your review included certain of our audit working papers related to our work at TRW's Space Park Facility for the year ended December 31, 1986.

We do not agree with the conclusions in the draft report as they relate to our firm and our financial audit at TRW's Space Park Facility and would like to respond to the significant factual inaccuracies in the draft report which we believe affected your conclusions. We are only commenting on matters related to Ernst & Whinney and not on any specific comments related to TRW or the American Institute of Certified Public Accountants.

Special Clearances

In the draft report you state that based on information provided by TRW and E&W, it appears that no one from E&W involved in TRW's 1986 audit had the clearances needed to review all information related to classified contracts. This statement is incorrect and does not reflect our discussions with you and members of your staff, nor does it reflect the substance of TRW's December 15, 1987 letter to you which is as follows:

See comment 1.

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1. TRW maintains a single accounting system in which no distinction is made for classified or unclassified programs;
2. Under this system, all basic accounting documents, such as journal vouchers, ledgers, etc., for every Government program and contract at TRW can be audited without any security clearance;
3. For classified contracts, in order to review some backup materials, such as contract terms and work descriptions, security clearances are required; and
4. Two E&W auditors had the necessary clearances for financial review of all contracts in connection with our 1986 audit.

We have always had the necessary clearances and have been able to obtain access to any information or documentation needed for our audit of TRW's Government contracts. Additionally, as we previously discussed with you and members of your staff, security requirements do not permit us to provide information to you regarding special access clearances, which representatives of our firm have them, or the nature of the programs they cover.

As stated above, we believe that the comments and conclusions reached in the draft report regarding special clearances are incorrect. If they are not amended to reflect the information previously provided to you and repeated here, they will result in an incorrect and misleading conclusion in your report.

Scope and Purpose of Ernst & Whinney Audit

We were engaged by TRW to perform an examination, in accordance with generally accepted auditing standards, of the consolidated financial statements of TRW as of and for the year ended December 31, 1986. These statements included the financial statements of TRW's Space Park Facility. The purpose of the examination was to express an opinion on the fairness with which TRW presented its consolidated financial position, results of operations, and changes in financial position in conformity with generally accepted accounting principles. An audit conducted in accordance with generally accepted auditing standards is not intended or designed specifically to cover all areas of special interest to the Government, such as charging practices and compliance with Government requirements.

Documentation of Internal Control System

We performed a study and evaluation of the system of internal accounting controls at TRW's Space Park Facility to the extent we considered

See comment 2.

Appendix III
Comments From Ernst & Whinney

 Ernst & Whinney

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necessary to determine the nature, timing, and extent of our auditing procedures. The review was not done to express an opinion on the system of internal accounting controls at TRW's Space Park Facility.

Our Specific Risk Analysis working papers, which included specific cross-references of the key system control attributes to Company manuals, and which were reviewed by members of your staff, document our review and understanding of the internal accounting control systems and the resultant audit procedures that we performed. In our meetings with you and members of your staff, we explained how our Specific Risk Analysis working papers, including the documentation of the key system control attributes, provided the basis for our conclusion that there was reasonable assurance that the specific control objective being tested was achieved. We strongly believe that we did perform and document our study and evaluation of the internal accounting control systems in accordance with the professional standards. While our 1986 management letter did not contain comments specifically related to TRW's Space Park Facility, we believe that it is inappropriate to conclude that this fact corroborates your view as to the scope of our procedures regarding the internal control systems.

Contract Cost Charges

We disagree with your statement that E&W officials agreed with you that they did not perform a detailed cost input or cost validation test.

In our tests of payroll charges and of other direct and indirect contract charges, we tested both the validity of the charge and its proper distribution to the correct contract or other cost objective. As documented in our working papers, we accomplished this by examining appropriate approvals substantiating the validity of the charge and by tracing the sample items through the cost distribution system to the final cost objective. Proper approvals, whether for payroll or other direct or indirect contract charges, are, by definition, control procedures.

The above described audit procedures provided us a basis to conclude that such controls were functioning and, in part, served as evidence that the specific control objectives concerning the validity of the cost distribution system had been achieved. Having tested and concluded that valid costs were being distributed to proper contracts and other cost objectives, we tested income recognition and related contract billings and evaluated the need for any provisions for unrecoverable contract costs. The findings of your review, which disclosed no improper cost charges, are not inconsistent with our findings.

Our assessment of the likelihood of material error in an affected account is based on several factors including, but not limited to, the design of control procedures within the internal control systems, the results of internal audit work, and various environmental factors such as audit

See comment 3.

See comment 4.

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findings of DCAA, prior audit results and our overall understanding of the Company, its contracts and the industry. We believe our assessment of a low likelihood of material error was appropriate for the specific control objectives related to the cost distribution system.

Self-Investigation Reports

The draft report states that we discussed the results of TRW's Self-Investigation Reports with TRW's financial and legal staff. This is correct. However, the draft report goes on to say that we did not expand the scope of our audit to evaluate Company charging practices involving IR&D and B&P. Under generally accepted auditing standards, an auditor is not required to expand his auditing procedures if he concludes a matter would not have a material effect on the financial statements on which he is expressing an opinion. This is what we concluded after discussion with management and Company legal counsel concerning the extent and result of their investigation.

See comment 5.

In summary, our audit of TRW's 1986 consolidated financial statements was performed in accordance with generally accepted auditing standards. Further, your draft report states that you found no improper charging or violations of law at TRW's Space Park Facility. Your findings are not inconsistent with the results of our financial audit at TRW's Space Park Facility, which was designed for the purpose of including such financial statements in the consolidated financial statements of TRW Inc. on which we expressed an opinion.

We request that the substance of our comments be reflected in your final report. If you have any questions or would like to meet with us, please contact Mr. J. E. Katzenmeyer at 216/861-5000.

Very truly yours,

Ernst & Whinney

The following are GAO's comments on Ernst & Whinney's letter dated April 14, 1989.

GAO Comments

1. E&W and TRW's comments on security clearances related to an item in the draft report which has been deleted from the final report.
2. See agency comments section of report.
3. We continue to believe that E&W's working papers did not adequately document TRW's system of internal control and how the system works in areas related to government contracting. In our opinion, reference to Company manuals does not demonstrate the extent to which the content of those manuals has been analyzed and understood. The statement that the management letter corroborates our view has been deleted.
4. In order to show GAO the nature of work done on contracts, Ernst & Whinney officials selected a set of working papers on one contract which they considered to be representative of the work done on all contracts. They told us that a detailed cost input test was not done on that contract. As to the test of payroll charges, the validity test of the charge consisted of testing whether a supervisor approved the time card. Given the importance of charging practices in the government contracting business, TRW's annual labor cost of about \$1 billion, and problems with labor charging identified by TRW, we continue to question the emphasis placed on it in this audit.
5. An annual labor cost of about \$1 billion coupled with problems disclosed by TRW led us to conclude that it would have been prudent to expand the scope of auditing done in the area of charging practices.

Major Contributors to This Report

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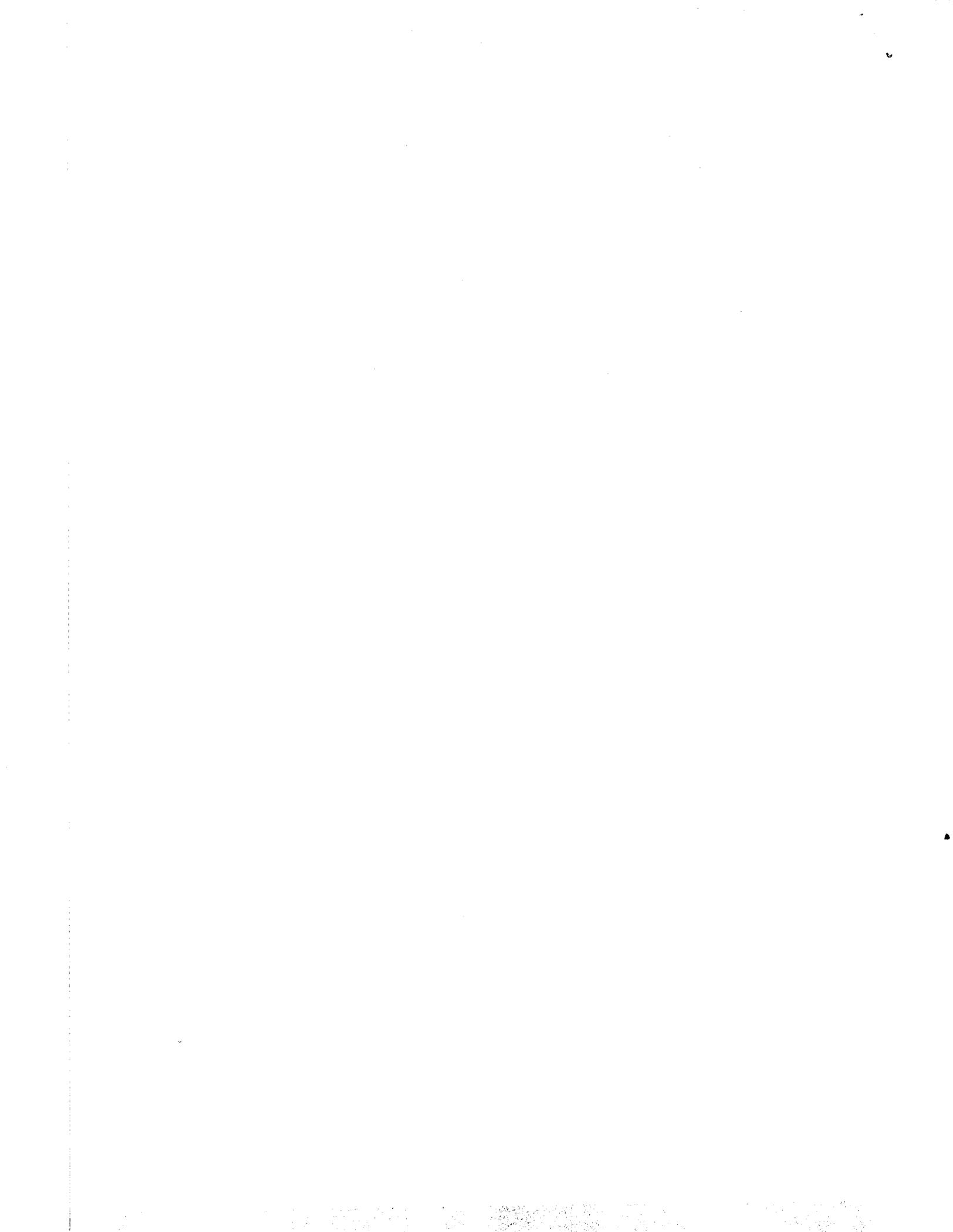
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